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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/795,987	03/10/2004	Fumiyuki Suzuki	Q78014	2238

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EXAMINER

RONESI, VICKEY M

ART UNIT PAPER NUMBER

1714

DATE MAILED: 11/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/795,987

Applicant(s)

SUZUKI ET AL.

Examiner

Vickey Ronesi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

2. Claim 2 is objected to because the phrase “the glass fiber comprises 5 to 30 % by weight” and “said hollow glass balloon comprises 5 to 30 % by weight” are grammatically confusing because it is not the glass fiber or glass balloon that comprises anything but the resin molded article which comprises the glass fiber and glass balloon. It is suggested that the beginning of the claim read as follows: “A resin molded article according to claim 1 comprising 5 to 30 % by weight of said glass fiber and 5 to 30 % by weight of said hollow glass balloon based on the total weight of the biodegradable plastic resin, the glass fiber, and the hollow glass balloon.”

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khemani et al (US 6,573,340) in view of Wilson et al (US 5,017,629) and Akiyama et al (US 5,412,003).

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Khemani et al discloses a biodegradable polymer composition for use in molded articles (col. 16, line 61) comprising a stiff biopolymer exemplified by polylactic acid (col. 8, lines 1-17, Example 6); a soft biopolymer; 5-95 wt % (col. 15, lines 59-60) fillers such as hollow glass spheres (i.e., balloons) (col. 15, line 16); and most preferably 10-30 wt % (col. 17, lines 4-5) fibers such as glass fibers (col. 16, line 38).

Khemani et al fails to disclose using a hollow glass balloon surface treated with a coupling agent or the amount of hollow glass balloon with sufficient specificity.

Wilson et al discloses a thermoplastic resin composition comprising polyester (col. 4, line 17), glass fibers, and hollow microspheres and teaches that hollow microspheres have a low alkalinity to make the microspheres more compatible with polymeric resins (col. 5, lines 45-54). Wilson further teaches that hollow microspheres are suitably used in amounts of 1-25 volume % to decrease the specific gravity of composition (col. 1, lines 14-15; col. 7, lines 12-28).

Wilson does not explicitly teach coupling agents.

Akiyama et al discloses an unsaturated polyester resin composition comprising hollow glass microspheres and teaches that hollow glass microspheres usually have an elution alkalinity of 0.10 meq/g however they are usually utilized after having the elution alkalinity reduced to less than 0.05 meq/g by either washing them in acid or using a coupling agent to carry out a surface treatment (col. 4, lines 19-26).

Given that hollow microspheres should have a low alkalinity to make them more compatible with polymeric resins as taught by Wilson et al and further given that the decrease of alkalinity occurs by treating with a coupling agent as taught by Akiyama et al, it would have been obvious to one of ordinary skill in the art to utilize a coupling agent to increase the

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compatibility between hollow microspheres and polylactic acid resin of Khemani et al and furthermore utilize the hollow glass microspheres in an amount of 1-25 volume % as taught by Wilson et al to thereby obtain a composition with the presently claimed heat distortion temperature and density given that a composition and its properties are inseparable.

Conclusion


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/2/2006
Vickey Ronesi




VASU JAGANNATHAN
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